

CLAIMS

What is claimed is:

1. In a system configured to generate code from XML schemas, a method for determining equivalence of XML schema types, the method comprising:
 - an act of identifying at least two XML schema types for which equivalence is to be determined, each of the at least two XML schema types having at least one schema component that can be presented differently in equivalent XML schema types;
 - a step for normalizing each of the XML schema types;
 - a step for determining equivalence of the at least two normalized XML schema types.
2. A method as recited in claim 1, wherein the step for determining equivalence includes creating and comparing hash numbers of the at least two normalized XML schema types.
3. A method as recited in claim 1, wherein the act of identifying the XML schema types includes identifying XML schema types having the same qname.
4. A method as recited in claim 1, wherein the step for normalizing each of the XML schema types includes writing the at least one schema component in each of at least two XML schema types according to a unified format and prior to determining equivalence.

5. A method as recited in claim 4, wherein writing the at least one schema component includes altering an order of at least two schema components within a single XML schema type.

6. A method as recited in claim 5, wherein altering the order includes placing the at least two schema components into alphabetical order.

7. A method as recited in claim 5, wherein prior to altering the order, it is determined that the order of the at least two schema components is discretionary.

8. A method as recited in claim 4, wherein the at least one component is a discretionary component that is not explicitly recited in at least one of the XML schema types, and wherein writing the at least one schema component includes writing the at least one schema component for a first time.

9. A method as recited in claim 1, further including:
upon determining equivalence, creating a single class that is used interchangeably for each equivalent XML schema type.

10. A computer program product comprising one or more computer-readable media having computer-executable instructions for implementing a method for determining equivalence of XML schema types, the method comprising:

an act of identifying at least two XML schema types for which equivalence is to be determined, each of the at least two XML schema types having at least one schema component that can be presented differently in equivalent XML schema types;

a step for normalizing each of the XML schema types;

a step for determining equivalence of the at least two normalized XML schema types.

11. A computer program product as recited in claim 10, wherein the step for determining equivalence includes creating and comparing hash numbers of the at least two normalized XML schema types.

12. A computer program product as recited in claim 10, wherein the step for normalizing each of the XML schema types includes writing the at least one schema component in each of at least two XML schema types according to a unified format and prior to determining equivalence.

13. In a system configured to generate code from XML schemas, a method for determining equivalence of XML schema types, the method comprising:

an act of identifying at least two XML schema types for which equivalence is to be determined, each of the at least two XML schema types having at least one schema component that can be presented differently in equivalent XML schema types;

an act of writing the at least one schema component in each of at least two XML schema types according to a custom format;

an act of comparing the at least two normalized XML schema types;

an act of generating a hash number for each of the at least two normalized XML schema types; and

an act of determining equivalence of the at least two normalized XML schema types when the hash number for each of the at least two normalized XML schema types are the same.

14. A method as recited in claim 13, wherein the act of identifying the XML schema types includes identifying XML schema types having the same qname.

15. A method as recited in claim 13, wherein writing the at least one schema component includes rewriting an existing schema component into a new format.

16. A method as recited in claim 13, wherein writing the at least one schema component includes writing a discretionary component into at least one of the XML schema types.

17. A method as recited in claim 13, wherein writing the at least one schema component includes altering an order of at least two schema components within a single XML schema type.

18. A method as recited in claim 17, wherein altering the order includes placing the at least two schema components into alphabetical order.

19. A method as recited in claim 17, wherein prior to altering the order, it is determined that the order of the at least two schema components is discretionary.

20. A method as recited in claim 13, further including:
upon determining equivalence, creating a single class that is used interchangeably for each equivalent XML schema type.

21. A method as recited in claim 13, wherein the at least one component is a schema particle definition.

22. A method as recited in claim 13, wherein the at least one component is a schema attribute.

23. A method as recited in claim 13, wherein the at least one component is at least one of a child and a sub-child of a named type.

24. A computer program product comprising one or more computer-readable media having computer-executable instructions for implementing a method for determining equivalence of XML schema types, the method comprising:

an act of identifying at least two XML schema types for which equivalence is to be determined, each of the at least two XML schema types having at least one schema component that can be presented differently in equivalent XML schema types;

an act of writing the at least one schema component in each of at least two XML schema types according to a custom format;

an act of comparing the at least two normalized XML schema types;

an act of generating a hash number for each of the at least two normalized XML schema types; and

an act of determining equivalence of the at least two normalized XML schema types when the hash number for each of the at least two normalized XML schema types are the same.

25. A computer program product as recited in claim 24, wherein, wherein the act of identifying the XML schema types includes identifying XML schema types having the same qname.

26. A computer program product as recited in claim 24, wherein writing the at least one schema component includes rewriting an existing schema component into a new format.

27. A computer program product as recited in claim 24, wherein writing the at least one schema component includes writing a discretionary component into at least one of the XML schema types.

28. A computer program product as recited in claim 24, wherein writing the at least one schema component includes altering an order of at least two schema components within a single XML schema type.

29. A computer program product as recited in claim 28, wherein altering the order includes placing the at least two schema components into alphabetical order.

30. A computer program product as recited in claim 28, wherein prior to altering the order, it is determined that the order of the at least two schema components is discretionary.

31. A computer program product as recited in claim 24, wherein the method further includes creating a single class that is used interchangeably for each equivalent XML schema type, upon determining equivalence.